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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/973,089	10/10/2001	Marie B. Connett-Porceddu	2411-111	4802

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EXAMINER

BAUM, STUART F

ART UNIT

PAPER NUMBER

1638

DATE MAILED: 11/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/973,089	Applicant(s) CONNETT-PORCEDDU ET AL.	
	Examiner Stuart F. Baum	Art Unit 1638	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5-8, 10, 11, 14-17, 19, 20 and 22-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-8, 10-11, 14-17, 19-20, and 22-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The amendment and 1.132 Declarations from Marie B Connett-Porceddu, Michael R. Becwar, David S. Canavera, and James E. Mann filed 8/9/2004 have been entered.
2. Claims 1-3, 5-8, 10-11, 14-17, 19-20, and 22-43 are pending and are examined in the present office action.
3. Rejections and objections not set forth below are withdrawn.
4. The text of those sections of Title 35, U.S. Code not included in this office action can be found in a prior office action.

103 Rejection

5. Claims 1-3, 5-8, 10-11, 14-17, 19-20, 22-43 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Wenck et al (1999, Plant Molecular Biology 39(3):407-416) taken with Rutter et al (1998, U.S. Patent 5,731,204) and Levee et al (1999, Molecular Breeding 5:429-440). This rejection is maintained for the reasons of record set forth in the Official action mailed 4/9/2004. Applicant's arguments 8/9/2004 have been fully considered but they are not persuasive.

Applicants contend that the selection medium of Wenck et al does not contain ABA (page 14, 1st full paragraph).

The Office contends that Applicants claims are drawn to selecting genetically modified pines on a medium comprising a differentiation agent of ABA, polyethelene glycol or a gelling agent. The medium of Wenck et al comprises a gelling agent.

Applicants contend that Wenck et al report the unsuccessful regeneration of transformed loblolly pine (page 14, 3rd paragraph). Applicants contend that Rutter et al do not disclose transgenic embryogenic pine cells of Southern yellow pines, and no disclosure of a selection medium. Furthermore, Levee et al do not describe the regeneration of genetically modified pine plant of the subgenus *Pinus* (paragraph bridging pages 14-15). Applicants discuss the differences between regeneration of hard and soft pines and the use of a differentiation agent in the medium (page 15, 1st full paragraph to page 17, 2nd paragraph).

Applicants contend, as stated in the Connett-Porceddu Declaration, that Wenck et al specifically teach that genetically modified plants of Southern yellow pine had not been obtained, which is opposite to the results that Wenck et al achieved for Norway spruce. Connett-Porceddu reiterates that Rutter et al does not teach the use of ABA in a selection medium for regenerating genetically modified Southern Yellow pine plants. Connett-Porceddu reiterates that Levee does not teach transformation and regeneration of a hard pine. Connett-Porceddu states that there are differences between hard and soft pines and that there is no expectation of success concerning transformation and regeneration of hard pines on the basis of results from soft pines. Connett-Porceddu states that it was discovered that hard pines could be transformed and regenerated to produce transgenic hard pine plants using the disclosed and claimed method of the present application. Connett-Porceddu states that there had been no report of the regeneration of transgenic plants of hard pines (i.e., pines of the subgenus *Pinus*) prior to the present invention and any reports at all, concerning regeneration of transgenic hard pines, demonstrated that regeneration was not achieved (e.g., Wenck et al., cited by the Examiner in this application) (page 17, bottom paragraph to page 21, 1st paragraph).

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Applicants contend based on the Declaration of Michael R. Becwar, that there are differences between hard and soft pines in relation to somatic embryogenesis and what works well for one group will not work for the other. Becwar also states that Wenck et al teach that genetically modified plants of Southern yellow pines had not been obtained. It is Becwar's opinion, the method of Wenck et al would not make obvious the method disclosed in the present application. Becwar contends that the use of ABA and/or PEG by Rutter et al is for embryo maturation during tissue culture whereas the present invention uses ABA and/or PEG to stimulate growth of transgenic tissue in tissue culture (page 21 2nd paragraph to page 24, line 3).

Applicants contend based on the Declarations of David S. Canavera and James E. Mann, there was a long-felt need to develop improved methods of *Agrobacterium* transformation of hard pines and improved selection of transformed tissue and methods to regenerate *Agrobacterium* transformed hard pines. Mann states that ArborGen has licensed the present application and companion application 09/973,088 because suitable protocols for such a system did not exist elsewhere (page 24, 1st full paragraph to page 26, 1st full paragraph).

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., a method for regenerating genetically modified plants of pine of the genus *Pinus* subgenus *Pinus*, and the use of ABA in the selection medium) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The Office contends that Applicants' claims are drawn to Southern Yellow pine and hybrids thereof. Based on the Declaration of Marie B. Connett-Porceddu, page 3, number 9, soft and hard pines can interbreed

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readily if the correct timing and other conditions are provided. Therefore, the recitation "hybrids thereof" encompasses soft pines which are regenerable using the method of Wenck et al. In addition, the method of Wenck et al make use of a gelling agent which Applicants claim is a differentiation agent. The Office acknowledges the long felt need for the methods as stated by Canavera and Mann, but contends that the presently claimed method for regenerating genetically modified plants of pine of the genus *Pinus*, subgenus *Pinus*, i.e., a method including hybrids thereof, and using PEG and a gelling agent as a differentiation agent, would be obvious over the method of Wenck et al in light of Rutter et al and Levee et al for the reasons as stated above.

6. No claims are allowed.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

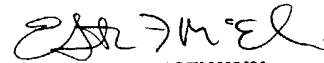
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8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stuart F. Baum whose telephone number is 571-272-0792. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amy Nelson can be reached on 571-272-0804. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-1600.

Stuart F. Baum Ph.D.
Patent Examiner
Art Unit 1638
November 12, 2004


ELIZABETH MCELWAIN
PRIMARY EXAMINER